MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016 / 2017

TCS 2251 – COMPUTER SECURITY

(All sections / Groups)

11 MARCH 2017
2.30 p.m. – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of 4 pages including the cover page.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Please print all your answers in the Answer Booklet provided.

QUESTION 1

a) Distinguish among vulnerability, threat and control.

(3 marks)

b) Briefly describe what is meant by "enforcing least privileged" when implementing a strategy for file protection.

(4 marks)

c) What are the possible consequences of Incomplete Mediation?

(3 marks)

QUESTION 2

a) Compare and contrast between symmetric encryption and asymmetric encryption.

(3 marks)

b) What is adware? In what situation an adware will be considered as malicious?

(3 marks)

c) Briefly describe columnar transposition. Encrypt the following message using a 5 columnar transposition method.

this is an unusual question

(4 marks)

QUESTION 3

a) As a security expert in your company, defend the idea on how Secure Sockets Layer (SSL) encryption can be the practical solution to secure the Internet connection at an e-commerce system.

(4 marks)

b) Distinguish between Pretty Good Privacy (PGP) and Secure Multipurpose Internet Mail Extensions (s/MIME).

(4 marks)

c) In which situation is TCP/IP connection vulnerable to eavesdropping?

(2 marks)

QUESTION 4

a) Given online banking transaction as the example, demonstrate why "Man-in-the-Browser Attack" is difficult to trace?

(5 marks)

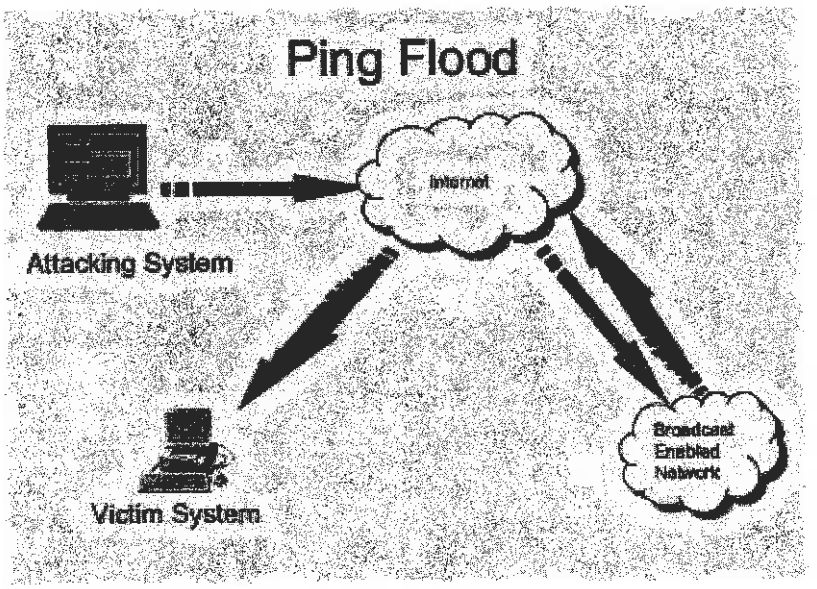
b) As a web developer, suggest a practical solution to secure and protect password authentication on your web server?

(3 marks)

c) Suggest TWO (2) security issues with using password authentication.

(2 marks)

QUESTION 5



(Source: http://picateshackz.com/wp-content/uploads/2015/03/DDoS-Attack-ping2B-2Bpicateshackz.jpgl)

a) Given the diagram above, briefly explain how the ping of death attack happens.

(3 marks)

b) How will Smurf Attacks jeopardize availability of a computer system?

(3 marks)

c) Port scanning is the legitimate act of systematically scanning a computer port. Briefly explain how port scanning can become the malicious activity by the attackers.

(4 marks)

QUESTION 6

a) What is a security plan? Why is it considered important for a good security practice?

(3 marks)

b) Quantifying security is about the estimation of the spending in security control. Why is it difficult to quantify security?

(4 marks)

c) Analyse the privacy right from the perspective of Utilitarianism ethics principle.

(3 marks)

End of Paper